

What is claimed is:

1. A method for filling a plurality of reactor tubes contained in a reactor vessel with at least one catalyst, comprising:

5           automatically measuring the catalyst by weight; and  
              dispensing the measured catalyst into one of the respective reactor tubes at a rate greater  
than one reactor tube filling per minute.

2. The method according to claim 1 further including:

10           delivering a bulk catalyst to a location of the reactor vessel for the purpose of measuring  
the catalyst performed prior to said measuring step.

3. The method according to claim 2 further including:

15           feeding and divaricating the bulk catalyst in a uniform manner prior to said measuring  
step.

4. The method according to claim 1 further including:

              collecting the measured catalyst in a catalyst containing device after said measuring step.

5. The method according to claim 1 further including:  
simultaneously and automatically measuring a plurality of separate quantities of the catalyst by weight; and  
dispensing each of the respective separate measured quantities of the catalyst into a plurality of separate respective reactor tubes.

6. The method according to claim 5 wherein said step of simultaneously and automatically measuring the plurality of separate quantities of the catalyst by weight comprises independently measuring each of the plurality of separate quantities of the catalyst by weight.

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7. The method according to claim 1 further including dispensing the measured catalyst into a multi-compartment cassette prior to said step of dispensing the measured catalyst into one of the respective reactor tubes.

15 8. A method for filling a plurality of reactor tubes contained in a reactor vessel with at least one catalyst, comprising:

automatically measuring a plurality of quantities of the catalyst by weight; and  
dispensing the plurality of quantities of the measured catalyst into a plurality of respective reactor tubes.

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9. The method according to claim 8 wherein said step of automatically measuring the plurality of quantities of the catalyst by weight comprises independently measuring each of the plurality of lanes of the catalyst by weight.

10. The method according to claim 8 further including:

delivering a bulk catalyst to a location of the reactor vessel for the purpose of measuring the catalyst performed prior to said measuring step.

5 11. The method according to claim 10 further including:

feeding and divaricating the bulk catalyst in a uniform manner prior to said measuring step.

12. The method according to claim 8 further including:

10 collecting the plurality of quantities of the measured catalyst in a plurality of respective catalyst containing devices after said measuring step.

13. The method according to claim 8 wherein said step of automatically measuring the plurality of quantities of the catalyst by weight includes simultaneous automatic measuring of the 15 plurality of quantities of the catalyst by weight.

14. The method according to claim 8 further including dispensing a plurality of the quantities of the measured catalyst into a multi-compartment cassette prior to said step of dispensing the plurality of quantities of the measured catalyst into a plurality of respective reactor tubes.

15. A method for filling a plurality of reactor tubes contained in a reactor vessel with at least one catalyst, comprising:

setting up a catalyst loading device at the reactor vessel worksite;

automatically measuring the catalyst by weight; and

5 dispensing the measured catalyst into one of the respective reactor tubes.

16. An apparatus for filling a plurality of reactor tubes contained in a reactor vessel with at least one catalyst, comprising:

a hopper;

10 a catalyst moving device mounted below the hopper;

a catalyst dispenser mounted below the catalyst moving device;

a scale attached to the catalyst dispenser; and

15 a computer in communication with the scale, the catalyst moving device and with the catalyst dispenser.

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17. The apparatus according to claim 16 wherein the catalyst moving device comprises a trough having one open end and a vibrating motor attached to the trough.

18. The apparatus according to claim 17 further including a gate mechanism mounted over 20 the open end of the trough and in communication with the computer.

19. The apparatus according to claim 18 wherein the gate mechanism has a brush.

20. The apparatus according to claim 18 further including:

5 a second hopper;

10 a second trough mounted below the second hopper, the second trough having one open end;

15 a second vibrating motor attached to the second trough;

20 a second gate mechanism mounted over the open end of the second trough;

25 a second catalyst dispenser mounted below the second trough and the second gate mechanism;

30 a second scale attached to the catalyst dispenser; and

35 wherein the computer is in communication with the second scale, the second vibrating motor and the second gate mechanism.

21. The apparatus according to claim 20 wherein the second gate mechanism has a second brush.

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22. The apparatus according to claim 16 wherein the catalyst dispenser includes a door mechanism.